

1. An LED light assembly comprising:
  - a housing;
  - an LED disposed in said housing;
  - a heat dissipating structure in thermal communication with said LED;
  - a fluid current generator disposed in said housing for creating a current over said heat dissipating structure, wherein said fluid current generator includes a piezoelectric material.
2. The assembly of claim 1, wherein said fluid current generator includes a blade comprising a flexible material, wherein the blade is spaced from a surface of said heat dissipating structure such that an unattached end of the blade can move in relation to the surface.
3. The assembly of claim 2, further comprising a pedestal extending from the surface of said heat dissipating structure, wherein the blade is attached to the pedestal such that the blade is spaced from the surface.
4. The assembly of claim 3, wherein said pedestal has a width at least equal to the width of the blade.
5. The assembly of claim 4, wherein said pedestal prevents axial current flow between the blade and the surface at an end of the blade that attaches to the pedestal.
6. The assembly of claim 2, wherein the piezoelectric material runs at least substantially the length of the blade.
7. The assembly of claim 2, further comprising a plurality of fins extending from the surface of said heat dissipating structure.
8. The assembly of claim 7, further comprising a pedestal extending from the surface, wherein the blade mounts to said pedestal.

9. The assembly of claim 8, wherein said pedestal is spaced from said plurality of fins to define a gap between said plurality of fins and said pedestal.
10. The assembly of claim 8, wherein said pedestal is adapted to prevent axial current flow between an end of the blade that is attached to said pedestal and the surface from which said pedestal extends.
11. The assembly of claim 1, wherein said heat dissipating structure includes a cavity defining an opening and said fluid current generator includes a blade attached to the heat dissipating structure, wherein the blade covers a portion of the opening.
12. The assembly of claim 11, wherein the cavity is defined by an end wall that impedes axial flow of current.
13. The assembly of claim 11, wherein said heat dissipating structure comprises a printed circuit board.
14. The assembly of claim 11, wherein the blade includes a flexible material attached to the piezoelectric material, wherein the flexible material is substantially the same length as the piezoelectric material.
15. The assembly of claim 11, wherein said heat dissipating structure includes a surface defining the opening and the blade mounts substantially flush with the surface.
16. The assembly of claim 11, wherein said fluid current generator is adapted to produce a substantially vortex shaped current around the flow path surface.
17. The assembly of claim 1, wherein said fluid current generator includes a first flexible side plate and a second flexible side plate connected by a flexible hinge.

18. The assembly of claim 17, wherein the first flexible side plate includes a first layer of piezoelectric material and a second layer of piezoelectric material.
19. The assembly of claim 18, wherein the first flexible plate includes a flexible material interposed between the first layer of piezoelectric material and the second layer of piezoelectric material.
20. The assembly of claim 17, wherein the piezoelectric material is attached to each of the first flexible side plate and the second flexible side plate.
21. The assembly of claim 17, wherein the first flexible plate, the second flexible plate and the flexible hinge define an internal cavity, said fluid current generator further including a discharge conduit in fluid communication with the internal cavity, the discharge conduit having a distal end adjacent the heat dissipating structure.
22. The assembly of claim 21, wherein the fluid current generator includes an orifice plate including an orifice in fluid communication with the distal end of the discharge conduit.
23. The assembly of claim 17, wherein the fluid current generator includes first and second orifices, wherein the first orifice is tapered.
24. The assembly of claim 23, wherein the second orifice is tapered in an opposite direction to the taper of the first orifice.
25. The assembly of claim 17, wherein said heat dissipating structure comprises a die for an LED.
26. The assembly of claim 1, wherein said fluid current generator includes a first current generator body and a second current generator body, wherein each of the current generator bodies includes a first flexible side plate and a second flexible side plate connected by a flexible hinge.

27. The assembly of claim 26, wherein said fluid current generator includes a discharge conduit in communication with a first internal cavity defined by the first flexible side plate, the second flexible side plate and the flexible hinge of the first current generator body and in communication with a second internal cavity defined by the first flexible side plate, the second flexible side plate and the flexible hinge of the second current generator body.

28. The assembly of claim 1, further comprising a plurality of fins extending from said heat dissipating structure.

29. The assembly of claim 28, wherein said fins radiate from a central point of said heat dissipating structure.

30. The assembly of claim 29, wherein said fluid current generator is positioned at or adjacent the central point of said heat dissipating structure.

31. The assembly of claim 28, wherein said fluid current generator includes a plurality of openings for creating a plurality of fluid currents.

32. The assembly of claim 28, wherein said fluid current generator includes a first plate, a second plate and a flexible hinge attaching the first plate to the second plate, wherein the flexible hinge includes a plurality of openings.

33. The assembly of claim 1, wherein said fluid current generator includes a first plate, a second plate, and a third plate, said first plate attached to said second plate by a first flexible hinge, said second plate attached to said third plate by a second flexible hinge, wherein the first flexible hinge includes an opening facing a first direction and the second flexible hinge includes an opening facing a second direction.

34. An LED light assembly comprising:  
a housing;

an LED disposed in said housing; and  
a synthetic jet actuator disposed in said housing for generating a current of fluid to cool said LED.

35. The LED light assembly of claim 34, wherein said synthetic jet actuator is aimed to provide a current of fluid for a particular LED.